

US EPA ARCHIVE DOCUMENT

## DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

### RCRA Corrective Action Environmental Indicator (EI) RCRIS code (CA725)

#### Current Human Exposures Under Control

**Facility Name:** General Motors North American Car Group (NACG)  
Lordstown Assembly Plant and Lordstown Metal  
Fabricating Division (MFD) Metal Fabricating Plant

**Facility Address:** 2300 Hallock Young Road, 2369 Ellsworth Bailey Road  
Lordstown, Ohio 44481

**Facility EPA ID #:** OHD 020 632 998, OHD 083 321 091

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

☒ If yes - check here and continue with #2 below.

☐ If no - re-evaluate existing data, or

☐ if data are not available skip to #6 and enter "IN" (more information needed) status code.

#### **BACKGROUND**

##### **Definition of Environmental Indicators (for the RCRA Corrective Action)**

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

##### **Definition of "Current Human Exposures Under Control" EI**

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

##### **Relationship of EI to Final Remedies**

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

##### **Duration / Applicability of EI Determinations**

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be “contaminated”<sup>1</sup> above appropriately protective risk-based “levels” (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater	X			Bennzene, bis(2-Ethylhexyl)phthalate, methylene chloride, thallium, manganese(Total), manganese (Dissolved)
Air (indoors) <sup>2</sup>		X		
Surface Soil (e.g., <2 ft)	X			Benzo(a)pyrene, ethylbenzene, xylenes(total), 2-methylnaphthalene, manganese
Surface Water		X		
Sediment	X			Arsenic, benzo(a)pyrene, benzo(b)flouranthene, dibenz(a, h)anthracene
Subsurf. Soil (e.g., >2 ft)	X			Arsenic, benzene
Air (outdoors)		X		

—— If no (for all media) - skip to #6, and enter “YE,” status code after providing or citing appropriate “levels,” and referencing sufficient supporting documentation demonstrating that these “levels” are not exceeded.

X If yes (for any media) - continue after identifying key contaminants in each “contaminated” medium, citing appropriate “levels” (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

—— If unknown (for any media) - skip to #6 and enter “IN” status code.

Rationale and Reference(s):

A Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI ) was conducted at the General Motors (NACG) Lordstown Assembly Plant and Lordstown Metal Fabricating Division (MFD)

<sup>1</sup> “Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based “levels” (for the media, that identify risks within the acceptable risk range).

<sup>2</sup> Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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Metal Fabricating plant in response to the findings presented in the Current Conditions Report (Haley & Aldrich, 2001a). The Current Conditions Report summarized the areas of interest (AOIs) at the site that had a potential for a release to the environment, thus requiring further investigation in the RFI.

During the RFI, samples of soil, groundwater and sediments were analyzed, and a screening-level risk evaluation was performed at each area of potential contamination, to evaluate possible risk to human health and the environment. Chemicals of potential concerns for soil were identified by comparing concentrations detected during field investigation to risk-based screening levels for groundwater protection (U.S. EPA Region 5), and preliminary remediation goals (PRGs) for industrial land use at  $10^{-5}$  risk (U.S. EPA Region 9).

Potential non-potable groundwater use exposures of off-site residents to constituents detected in shallow groundwater are evaluated using conservative risk-based screening criteria. The derivation of these criteria for assessing residential exposures via direct contact and inhalation associated with use of groundwater in a residential "kiddie" pool is used. The Kiddie Pool criteria is based non-potable on inhalation exposures to vapor, dermal contact, and incidental ingestion of groundwater in a kiddie pool. The kiddie pool criteria is based on  $10^{-5}$  risk.

Samples which had contaminants exceeding the screening criteria are listed below in Table 1.

**TABLE 1**

	Date	AOI	Sample	Contaminant	Screening Criteria	Concentration mg/kg
Sediment					Industrial Soil mg/kg	
onsite	6/01	AOI-33	SS3	Benzo(a)pyrene	2.1	5
	6/01	-	SS4	Benzo(a)pyrene	2.1	5.6
	6/01	-	SS5	Benzo(a)pyrene	2.1	20
	6/01	-	SS5	Benzo(b)flouranthene	21	29
	6/01	-	SS5	Dibenz(a,h)anthracene	2.1	3 J
offsite	6/01	-	SOS3C	Benzo(a)pyrene	2.1	5.2
	6/01	-	SOS2B	Arsenic	16	71.4
	5/03	Metal FabBasin	SD009	Benzo(a)pyrene	2.1	4.8 J/6.7 J
	5/03	-	SD010	Benzo(a)pyrene	2.1	2.8J

**Soil**

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	Date	AOI	Sample	Contaminant	Screening Criteria	Concentration mg/kg
Surface (0-2ft)	4/01	AOI-1	GP-8	Benzo(a)pyrene	2.1	7.7
Surface (0-2ft)	4/01	-	GP-9	Benzo(a)pyrene	2.1	2.5
Subsurface (6-8ft)	4/01	-	GP-4	Arsenic	16	36.4
Surface (0-2ft)	4/01	AOI-7	GP-16	Manganese	19000	27800
Surface (0-2ft)	4/01	-	GP-17	Manganese	19000	25000
Surface (0-2ft)	4/01	AOI-13	GP-24	Ethylbenzene	200	350
Surface(0-2ft)	4/01	-	-	Xylene (Total)	900	3400
Surface(0-2ft)	4/01	-	-	2 Methyl Naphthalene	190	220 J
Subsurface (4.5-5ft)	7/01	AOI-31	GP-82	Arsenic	16	38
Subsurface (7.5-9ft)	12/01	AOI-35	GP-102	Benzene	13	18
Surface(1.5-2ft)	10/01	AOI-39	GP-89	Manganese	19000	24500
Subsurface (9-11ft)	12/01	AOI-42	GP-108	Arsenic	16	46.6
Subsurface (8-11ft)	4/01	GM Ditch Wells	MW-208S	Arsenic	16	42.4
<b>Perched Aquifer</b>					<b>Kiddie Pool Criteria</b> □ g/L	<b>Concentration</b> □ g/L
	1/02	AOI-35	MW-214	Benzene	550	2200
	12/02	-	-	Benzene	550	580
<b>Berea Sandstone Aquifer</b>					<b>MCL</b> □ g/L	<b>Concentration</b> □ g/L
	1/03	Deep Perimeter Wells	MW-314	bis(2-Ethylhexyl) phthalate □	6.0	5.2J/31
					<b>Tap Water PRG</b> □ g/L	<b>Concentration</b> □ g/L
	6/02	-	-	MethyleneChloride	4.3	6.8
	1/03	-	-	MethyleneChloride	4.3	ND(1)

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Date	AOI	Sample	Contaminant	Screening Criteria	Concentration mg/kg
				MCL □ g/L	Concentration □ g/L
7/01	Deep Perimeter Wells	Test Well #4	Thallium	2	21
12/01	-	-	Thallium	2	ND(1)
				Tap Water PRG □ g/L	Concentration □ g/L
12/01	-	-	Manganese(Total)	880	22800
1/02	-	-	Manganese(Total)	880	4900
7/01	-	-	Manganese (Dissolved)	880	18700
12/01	Deep Perimeter Wells	Test Well #4	Manganese (Dissolved)	880	22700
1/02	-	-	Manganese (Dissolved)	880	4700
6/02	-	-	Manganese (Dissolved)	880	3400
12/02	-	-	Manganese (Dissolved)	880	3100
3/03	-	-	Manganese (Dissolved)	880	860

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3. Are there **complete pathways** between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential **Human Receptors** (Under Current Conditions)

<b><u>“Contaminated” Media</u></b>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food <sup>3</sup>
Groundwater	No	Yes	No	Yes	No	No	No
<del>Air (indoors)</del>	—	—	—				
Soil (surface, e.g., <2 ft)	No	Yes	No	Yes	Yes	No	No
<del>Surface Water</del>	—	—					
Sediment	No	Yes	No	No	Yes	No	No
Soil (subsurface e.g., >2 ft)	No	No	No	Yes	No	No	No

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors’ spaces for Media which are not “contaminated” as identified in #2 above.
2. enter “yes” or “no” for potential “completeness” under each “Contaminated” Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential “Contaminated” Media - Human Receptor combinations (Pathways) do not have check spaces (“\_\_\_”). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

\_\_\_ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter “YE” status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

X If yes (pathways are complete for any “Contaminated” Media - Human Receptor combination) - continue after providing supporting explanation.

\_\_\_ If unknown (for any “Contaminated” Media - Human Receptor combination) - skip to #6 and enter “IN” status code.

Rationale and Reference(s):

The RFI findings presented two aquifers at the facility; a) the shallow, or perched wholly within the slag fill and on top of the original glacial till surface; and b) the uppermost Berea sandstone aquifer beneath a

<sup>3</sup> Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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weathered shale. The perched unconfined aquifer consists of glacial till overlying a weathered clay/shale bedrock ranging from 2 to 50 feet thick and is continuous throughout the site.

Samples taken from both aquifers were screened against MCLs and Region 9 tap water PRGs for constituents without MCLs. Some of the earlier samples from the Berea Sandstone Aquifer were contaminated. Samples taken from Test Well #4 during 2001 and 2002 were contaminated with manganese, and the concentrations were decreasing. The sample taken in March 2003 confirmed that the groundwater in this well now meets the screening criteria. Thallium was found in the same well in July 2001, but has not exceeded the MCL in subsequent sampling events. A sample taken from MW-314 appeared to be contaminated with methylene chloride, but methylene chloride was not detected in the sample taken during January 2003. MW-314 appeared to be contaminated with bis (2-Ethylhexyl) phthalate, but this was later determined to be a laboratory contaminant. The most recent samples taken from the Berea Sandstone Aquifer meet the screening criteria, so this aquifer is no longer contaminated.

Samples taken from the perched zone were contaminated, but the perched zone is not a drinking water supply, and is not currently or reasonably expected to be a future drinking water supply. The perched zone solely exists due to fill required to allow construction at the site. The fill material consists of reworked silt, sandy silt, organic materials, industrial slag, foundry sand, and cinders. The fill is the principal source of manganese in the perched zone. Manganese values exceeding screening levels will be addressed with corrective measures. Currently, the manganese concentrations are being monitored, and manganese is not migrating out of the fill.

Exposure of construction workers to overburden groundwater is possible through direct contact during construction activities extending into the water table. Exposure of workers and trespassers to surface soil is possible at unpaved areas. Exposure of construction workers to surface and subsurface soil during excavation is possible. Exposure of maintenance workers and trespassers to sediment in AOI-33, the on-site Detention Basins, and the Off-Site Sediment is possible.



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4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **“significant”**<sup>4</sup> (i.e., potentially “unacceptable” because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable “levels” (used to identify the “contamination”); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable “levels”) could result in greater than acceptable risks)?

  X   If no (exposures can not be reasonably expected to be significant (i.e., potentially “unacceptable”) for any complete exposure pathway) - skip to #6 and enter “YE” status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to “contamination” (identified in #3) are not expected to be “significant.”

\_\_\_\_\_ If yes (exposures could be reasonably expected to be “significant” (i.e., potentially “unacceptable”) for any complete exposure pathway) - continue after providing a description (of each potentially “unacceptable” exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to “contamination” (identified in #3) are not expected to be “significant.”

\_\_\_\_\_ If unknown (for any complete pathway) - skip to #6 and enter “IN” status code

Rationale and Reference(s):

**Sediment**

Potential exposure of workers and trespassers to sediment in AOI-33, the Metal Fabricating Basin, the Assembly Plant Basins, and the Off-Site Sediment Area is possible. The potential human health significance of these exposures were evaluated by conservatively using the routing worker scenario. Potential maintenance worker and trespasser exposures to sediments would be lower than those characterized by a routine worker receptor. To assess the potential risks associated with exposure of maintenance workers to constituents in sediment in each of these areas, the maximum concentrations of chemicals detected in each area were conservatively assumed to represent the exposure point concentration in that area. The cumulative cancer risks and noncancer hazard index (HI) for each of these areas are:

	Cumulative Cancer Risk	Hazard index
AOI-33 1971 Polymer Release Area:	$1 \times 10^{-4}$	.3
AOI-43 Former Container Storage Area:	$2 \times 10^{-7}$	.4

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<sup>4</sup> If there is any question on whether the identified exposures are “significant” (i.e., potentially “unacceptable”) consult a human health Risk Assessment specialist with appropriate education, training and experience.

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	Cumulative Cancer Risk	Hazard index
Metal Fab Basin:	$4 \times 10^{-5}$	.3
Off-Site Sediment:	$7 \times 10^{-5}$	.3
North Assembly Basin:	$9 \times 10^{-6}$	.3
South Assembly Basin :	$9 \times 10^{-6}$	.3

The cumulative cancer risk for each of these AOI's are within acceptable risk. Therefore, sediment in AOI-33, AOI-43, the Metal Fabricating Basin, the Assembly Plant Basins, and the Off-Site Sediment Area does not pose and unacceptable risk to maintenance workers or trespassers. There is no fishing activity in the area where the off-site sediment samples were taken, so there would be no human exposure through fish consumption.

#### **Soil**

##### AOI-1 Construction Debris Area

The concentration of benzo(a)pyrene and arsenic in soil samples from AOI-1 were higher than the screening criteria. The screening criteria of 2.1mg/kg for benzo(a)pyrene and 16 mg/kg for arsenic are based on exposures of routine industrial workers via ingestion and dermal contact. Both criteria are based on a target cancer risk of  $10^{-5}$ . The cancer risk for benzo(a)pyrene is  $3.7 \times 10^{-5}$ . The cancer risk and hazard index for arsenic is  $2.3 \times 10^{-5}$ , and .14 respectively. The risk and HI from background concentrations of arsenic is  $1.1 \times 10^{-5}$  and .07. Potential construction worker and trespasser exposures to soil would be lower than potential routine industrial worker exposures because they would be in the area for shorter periods of time; therefore, the presence of benzo(a)pyrene and arsenic in soils at AOI-1 does not pose an unacceptable risk to these current potential receptors.

##### AOI-31 Fluid Fill Area, Passenger Car Assembly Plant

The concentrations of arsenic in one soil sample from AOI-31 was higher than the screening criteria. However, the contaminated soil in AOI-31 is currently covered under concrete slab, so the only potential exposure is to workers during subsurface construction or maintenance in the area. The screening criterion of 16 mg/kg for arsenic is based on ingestion and dermal contact to industrial workers on a regular routine. The criterion is based on a target cancer risk of  $10^{-5}$ . The cancer risk and HI for arsenic at AOI-31 would be  $2.4 \times 10^{-5}$  and .14 respectively, if the concrete slab was not present. The risk and HI from background concentrations of arsenic is  $1.1 \times 10^{-5}$  and .07. Potential construction worker exposures to soil would be lower than the hypothetical routine industrial worker exposures; therefore, the presence of arsenic in soils at AOI-31 does not pose an unacceptable risk to these current potential receptors.

##### AOI-42 Used Oil Above-Ground Storage Tanks

The concentrations of arsenic in one soil sample from AOI-42 was higher than the screening criteria. However, the contaminated soil in AOI-42 is currently covered under concrete, so the only potential exposure is to workers during subsurface construction or maintenance in the area. The screening criteria of 16 mg/kg for arsenic is based on ingestion and dermal contact to industrial workers on a regular routine. The criterion is based on a target cancer risk of  $10^{-5}$ . The cancer risk and HI for arsenic at AOI-42 would be  $2.9 \times 10^{-5}$  and .18 respectively, if the concrete slab was not present. The risk and HI from background concentrations of arsenic is  $1.1 \times 10^{-5}$  and .07. Potential construction worker exposure to soil would be lower than the hypothetical routine industrial worker exposure. The presence of arsenic in soils at AOI-42 does not pose an unacceptable risk to these current potential receptors.

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GM Ditch Area

The concentration of arsenic in one soil sample from a GM Ditch well was higher than the screening criteria. The arsenic concentration at well MW-208s is 8 to 10 ft. below ground surface, so the only potential exposure is to workers during subsurface construction or maintenance in the area. The screening criterion of 16 mg/kg for arsenic is based on ingestion and dermal contact to industrial workers on a regular routine. The criterion is based on a target cancer risk of  $10^{-5}$ . The cancer risk and hazard index for arsenic would be  $2.7 \times 10^{-5}$  and 0.16 if the contaminated soil was near the ground surface. The risk from background concentrations of arsenic is  $1.1 \times 10^{-5}$  and .07. Potential construction worker exposures to soil would be lower than hypothetical routine industrial worker exposures, therefore the presence of arsenic in soils from the GM Ditch wells does not pose and unacceptable risk to these current potential receptors.

AOI-7 Fire Training Area

The concentration of arsenic, manganese and thallium exceeded the industrial screening criteria in AOI-7. The criterion is based on a target cancer risk of  $10^{-5}$ . The cancer risk and HI for arsenic at AOI-7 is  $1.3 \times 10^{-5}$  and .08 respectively. The HI for manganese and thallium are 1.4 and 0.1. The cancer risk and HI from background concentrations of arsenic is  $1.1 \times 10^{-5}$  and .07. The background concentration of manganese is .024 mg/kg and thallium is .009 mg/kg. The maximum concentration of manganese in AOI-7 is  $2.78 \times 10^4$  mg/kg. This concentration is lower than the Region 9 PRG soil inhalation criteria of  $9.4 \times 10^4$  mg/kg for manganese, and slightly higher than the soil ingestion criteria of  $2.5 \times 10^4$  mg/kg. Potential construction worker and trespasser exposures to soil would be lower than potential routine worker exposures; therefore, the presence of these constituents in soil at AOI-7 does not pose an unacceptable risk.

AOI-13 Hazardous Waste Drum Unload Area

The concentrations of ethylbenzene, xylenes (total), and 2-methylnaphthalene in one soil sample from AOI-13 were higher than the screening criteria. However, the contaminated soil in AOI-13 is currently covered under concrete slab, so the only potential exposure is to workers during subsurface construction or maintenance in the area. The screening criteria of 200 mg/kg for ethylbenzene, 900mg/kg for xylenes (total), and 190 mg/kg for 2-methylnaphthalene (used criterion for pyrene as a surrogate) are based on routine worker exposure to soil. The noncancer HI and cancer risk to routine industrial workers for ethylbenzene would be  $1.75 \times 10^{-5}$ , and .05, if the concrete slab was not present. The noncancer HI for xylenes (total) and 2-methylnaphthalene would be approximately 3.8 and 1.2. Potential construction worker and trespasser exposures to soil would be lower than the hypothetical routine industrial worker exposures. Therefore the presence of ethylbenzene, xylenes (total), and 2-methylnaphthalene in soils at AOI-13 does not pose an unacceptable risk to these current potential receptors.

AOI-35 UST Area #4

The concentration of benzene in one soil sample from AOI-35 was higher than the screening criterion. Contaminated soil in AOI-35 is currently covered under pavement, so the only potential exposure is to workers during subsurface construction or maintenance in the area. The cancer risk and noncancer HI to routine industrial workers would be  $1.4 \times 10^{-5}$  and 0.8 if the pavement was not present. Potential construction worker exposures to soil would be lower than the hypothetical routine worker exposures; therefore; the presence of benzene in soils at AOI-35 does not pose and unacceptable risk to these current potential receptors.

AOI-39 Container Storage Area

The container storage area consist of a 30-by-30-foot concrete area surrounded by a 6-inch concrete berm and a 6-foot chain link fence with barbed wire. There is a 15-foot crack in the concrete running diagonally

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from the northwest corner to the southeast portion of the pad and the berm surrounding the pad is eroding, which would allow contaminated water to run off of the pad. Manganese is the only constituent in soil samples from AOI-39 that has concentrations higher than the industrial screening criteria. The noncancer HI for manganese for a routine industrial worker exposed to soil at AOI-39 is approximately 1.1. The noncancer HI from background concentrations of manganese is .02. Potential construction worker exposures to soil would be lower than potential routine worker exposures; therefore, the presence of manganese in soils at AOI-39 does not pose an unacceptable risk to these current potential receptors.

**Groundwater**

The detected overburden groundwater concentrations of benzene at AOI-35 exceeded one of the criteria used for identifying contamination in those areas where groundwater has the potential to migrate off-site. These criteria are based on residential non-potable exposures to groundwater. Under current conditions, potential receptors that could be exposed to constituents in on-site groundwater include on-site routine workers and excavation.

Routine workers at the facility are not exposed to overburden groundwater directly, but could be exposed to constituents that volatilize from the groundwater and migrated into indoor air through cracks in building foundations. To evaluate potential exposure of routine industrial workers via this pathway, the modeled indoor air concentrations resulting from the contaminated groundwater at AOI-35 were compared with the Occupational Health and Safety Administration Permissible Exposure Limits for inhalation exposure to vapor from groundwater that migrate into building indoor air. No constituent concentrations in AOI-35 are greater than these criteria. Therefore groundwater concentrations in AOI-35 do not pose an unacceptable risk to current on-site routine workers.

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5. Can the “significant” **exposures** (identified in #4) be shown to be within **acceptable** limits?

- \_\_\_\_\_ If yes (all “significant” exposures have been shown to be within acceptable limits) - continue and enter “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).
  
- \_\_\_\_\_ If no (there are current exposures that can be reasonably expected to be “unacceptable”)- continue and enter “NO” status code after providing a description of each potentially “unacceptable” exposure.
  
- \_\_\_\_\_ If unknown (for any potentially “unacceptable” exposure) - continue and enter “IN” status code

Rationale and Reference(s):

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- Completed by \_\_\_\_\_ Date \_\_\_\_\_  
 (signature)  
 \_\_\_\_\_  
 (print) Tammy Moore  
 \_\_\_\_\_  
 (title) Environmental Scientist  
 \_\_\_\_\_
- Supervisor \_\_\_\_\_ Date \_\_\_\_\_  
 (signature)  
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 (print) George Hamper  
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 (title) Section Chief  
 \_\_\_\_\_  
 (EPA Region or State) EPA Region 5

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Locations where References may be found:

U.S. EPA Records Room  
7<sup>th</sup> floor  
77 West Jackson Boulevard  
Chicago, IL 60604

All material referenced in this document can be found in the following reports:

1. Current Conditions Report (Haley & Aldrich 2000)
2. Current Conditions Report Addendum # 1((Haley & Aldrich 2001)
3. RCRA Facility Investigation (RFI) Work Plan (Haley & Aldrich 2001)
4. RCRA Facility Investigation Final Report (Haley & Aldrich 2003)
5. RCRA Environmental Indicators Report (Environ 2003)

Contact telephone and e-mail numbers

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**FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.**